

Appln No.: 09/681,691
Amendment Dated: June 27, 2005
Reply to Office Action of April 5, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) An enclosure services processor card arranged to selectively split a fibre-channel arbitrated-loop (FC-AL) of devices into two split loops,

said card being adapted to plug into a backplane for a rack enclosure and including a first switch operatively connected to a hub for said FC-AL,

said hub comprising a plurality of port bypass circuits,

each port bypass circuit being connected to a pair of tracks which in use connect to a respective one of each of said devices comprising said fibre channel arbitrated loop,

said hub further comprising second and third switches operatively controlled by said first switch,

said second and third switches being disposed between respective port bypass circuits at which said loop is to be split so that in a first state said second and third switches connect said devices in a single loop and in a second state said second and third switches divide said devices into two split loops,

said single loop of the first state having a first bandwidth,

said two split loops of the second state having a second bandwidth, said second bandwidth being

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twice that of the first bandwidth.

2. (Previously presented) An enclosure services card as claimed in claim 1 wherein said card includes an enclosure services processor operatively connected to said first switch, said enclosure services processor being operable to selectively control said first switch to split said fibre-channel devices into two split loops.

3. (Previously presented) An enclosure services card as claimed in claim 1 wherein said first switch comprises a jumper, said jumper being configurable to selectively split said fibre-channel devices into two split loops.

4. (Previously Presented) An enclosure services processor card arranged to selectively split a fibre-channel arbitrated-loop (FC-AL) of devices into two split loops,

said card being adapted to plug into a backplane for a rack enclosure and including a first switch operatively connected to a hub for said FC-AL,

said hub comprising a plurality of port bypass circuits,

each port bypass circuit being connected to a pair of tracks which in use connect to a respective one of each of said devices comprising said fibre channel arbitrated loop,

said hub further comprising second and third switches operatively controlled by said first switch,

said second and third switches being disposed between respective port bypass circuits at which said loop is to be split so that in a first state said second and third switches connect said devices in a single loop and in a second state said second and third switches divide said devices into two

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split loops,

wherein said hub further comprises a further port bypass circuit being connected to a pair of tracks which in use connect to an expansion port through which a further one or more devices can be connected to said loop.

5. (Previously presented) An enclosure services card as claimed in claim 4 wherein said hub further comprises a pair of tracks connected between a pair of port bypass circuits and which in use connect to a host device.

6. (Previously presented) An enclosure services card as claimed in claim 5 wherein said pair of tracks are arranged to locate said host device in a first split loop and said further port bypass circuit is arranged to locate said expansion port in a second split loop.

7. (Previously presented) A rack enclosure comprising a processor card as claimed in claim 1, a backplane and a plurality of devices connected to said backplane forming one or more fibre channel arbitrated loops.

8. (Previously presented) An enclosure services card as claimed in claim 1 wherein said hub further comprises a further port bypass circuit being connected to a pair of tracks which in use connect to an expansion port through which a further one or more devices can be connected to said loop.

9. (Previously presented) An enclosure services card as claimed in claim 8 wherein said hub further comprises a pair of tracks connected between a pair of port bypass circuits and which in use connect to a host device.

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10. (Previously presented) An enclosure services card as claimed in claim 9 wherein said pair of tracks are arranged to locate said host device in a first split loop and said further port bypass circuit is arranged to locate said expansion port in a second split loop.

11. (New) An enclosure services processor card arranged to selectively split a fibre-channel arbitrated-loop (FC-AL) of devices into two split loops,

said card being adapted to plug into a backplane for a rack enclosure and including a first switch operatively connected to a hub for said FC-AL,

said hub comprising a plurality of port bypass circuits,

each port bypass circuit being connected to a pair of tracks which in use connect to a respective one of each of said devices comprising said fibre channel arbitrated loop,

said hub further comprising second and third switches operatively controlled by said first switch,

said second and third switches being disposed between respective port bypass circuits at which said loop is to be split so that in a first state said second and third switches connect said devices in a single loop and in a second state said second and third switches divide said devices into two split loops,

whereby dividing said devices into two split loops gives rise to a bandwidth double that of the devices connected in single loop.

12. (New) An enclosure services card as claimed in claim 11 wherein said card includes an enclosure services processor operatively connected to said first switch, said enclosure services

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processor being operable to selectively control said first switch to split said fibre-channel devices into two split loops.

13. (New) An enclosure services card as claimed in claim 11 wherein said first switch comprises a jumper, said jumper being configurable to selectively split said fibre-channel devices into two split loops.

14. (New) A rack enclosure comprising a processor card as claimed in claim 11, a backplane and a plurality of devices connected to said backplane forming one or more fibre channel arbitrated loops.

15. (New) An enclosure services card as claimed in claim 11 wherein said hub further comprises a further port bypass circuit being connected to a pair of tracks which in use connect to an expansion port through which a further one or more devices can be connected to said loop.

16. (New) An enclosure services card as claimed in claim 15 wherein said hub further comprises a pair of tracks connected between a pair of port bypass circuits and which in use connect to a host device.

17. (New) An enclosure services card as claimed in claim 16 wherein said pair of tracks are arranged to locate said host device in a first split loop and said further port bypass circuit is arranged to locate said expansion port in a second split loop.

18. (New) A method for use with an enclosure services processor card arranged to selectively split a fibre-channel arbitrated-loop (FC-AL) of devices into two split loops, said card being adapted to plug into a backplane for a rack enclosure and including a first switch operatively connected to a hub for said FC-AL, said hub comprising a plurality of port bypass circuits, each

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port bypass circuit being connected to a pair of tracks which in use connect to a respective one of each of said devices comprising said fibre channel arbitrated loop, said hub further comprising second and third switches operatively controlled by said first switch, said second and third switches being disposed between respective port bypass circuits at which said loop is to be split so that in a first state said second and third switches connect said devices in a single loop and in a second state said second and third switches divide said devices into two split loops, the method comprising the step of:

flipping said first switch from a first position to a second position,

the operation of which causes each of said second and said third switches to flip from a first position to a second position,

thereby dividing said devices into two split loops,

said two split loops together having twice the bandwidth of said devices connected in a single loop.

19. (New) The method of claim 18 further comprising the step of:

flipping said first switch from said second position to said first position,

the operation of which causes each of said second and said third switches to flip from said second position to said first position,

thereby connecting said devices into a single loop,

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said single loop having one-half the bandwidth of said devices divided into two split loops.

20. (New) A method for use with an enclosure services processor card arranged to selectively split a fibre-channel arbitrated-loop (FC-AL) of devices into two split loops, said card being adapted to plug into a backplane for a rack enclosure and including a first switch operatively connected to a hub for said FC-AL, said hub comprising a plurality of port bypass circuits, each port bypass circuit being connected to a pair of tracks which in use connect to a respective one of each of said devices comprising said fibre channel arbitrated loop, said hub further comprising second and third switches operatively controlled by said first switch, said second and third switches being disposed between respective port bypass circuits at which said loop is to be split so that in a first state said second and third switches connect said devices in a single loop and in a second state said second and third switches divide said devices into two split loops, the method comprising the step of:

flipping said first switch from a second position to a first position,

the operation of which causes each of said second and said third switches to flip from a second position to a first position,

thereby connecting said devices into a single loop,

said single loop having one-half the bandwidth of said devices divided into two split loops.

21. (New) The method of claim 20 further comprising the step of:

flipping said first switch from said first position to said second position,

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the operation of which causes each of said second and said third switches to flip from said first position to said second position,

thereby dividing said devices into two split loops,

said two split loops together having twice the bandwidth of said devices connected in a single loop.